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10/668,933	09/23/2003	Aric Van Zon	TS1260 02 (US)	3359

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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/668,933
Filing Date: September 23, 2003
Appellant(s): VAN ZON ET AL.

Donald F. Haas
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 3/17/2006 appealing from the Office action mailed 12/22/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

Application serial number 10/668,934 has an appeal brief filed on 10/28/2005 which has been responded by the examiner in an examiner's answer mailed on 11/18/2005.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

3,461,109 Hinton et al 8-1969

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-7 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibson et al (WO 00/15646) in view of Hinton (3,461,109).

Gibson discloses a process of polymerization of ethylene in a reactor containing an iron complex catalyst and methylaluminoxane as a cocatalyst , a liquid phase, and a gas phase of which is heat-exchanged (the abstract; page 5, lines 8-32; page 9, lines 24-25; page 12, lines 10-25; page 13, lines 10-25).

It appears that Gibson does not disclose using a heat-exchanger located in the gas phase inside the reactor (see entire patent for details). However, Hinton discloses a polymerization process having a reactor containing a heat-exchanger in the gas phase of the reactor (col. 1, the abstract, the figure).

It would have been obvious to one having oridinary skill in the art at the time the invention was made to have modified the Gibson process by moving the heat-exchanger from outside to inside of the reactor since Hinton teaches that a reactor having an inside heat exchanger outperforms the same with an outside heat exchanger (col. 2, lines 11-32).

The difference is that while applicants claim an oligomerization (also a polymerization) to produce alpha-olefin oligomer, Gibson disclose producing polymer (see entire patent for details). However, as known, oligomerization (low-weight product) is also a polymerization (high-weight product) and as disclosed on page 12, lines 2-5 of Gibson, the average molecular weight of the produced polymer can be controlled.

It would have been obvious to one having ordinary skill in the art who wishes to produce low-weight polymer (such as oligomers) at the time the invention was made to have modified the Gibson process by selecting an appropriate temperature to obtain the desired oligomers.

Note that inert gas such as pentane is also present the reaction of Gibson (page 13, lines 10-25).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 10/668,592 in view of Hinton (3,461,109). Although the conflicting claims are not identical, they are not patentably distinct from each other because the conflicting claims discloses a process substantially the same except the conflicting process does not disclose that the process is carried out in a reactor comprising a liquid phase and gas phase and the heat of the reaction is removed by a heat exchanger positioned in the gas phase of the reactor. However, Hinton discloses a polymerization process having a reactor containing a heat-exchanger in the gas phase of the reactor (col. 1, the abstract, the figure). It would have been obvious to one

having oridinary skill in the art at the time the invention was made to have modified the Gibson process by moving the heat-exchanger from outside to inside of the reactor since Hinton teaches that a reactor having an inside heat exchanger outperforms the same with an outside heat exchanger (col. 2, lines 11-32).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

(10) Response to Argument

Appellants argue that the examiner's reference at page 12 of the specification of Gibson is only in connection with a gas phase polymerization. On page 12, lines 10-23 Gibson teaches a polymerization process contains both liquid and gas phases. On page 13, line 22-23, Gibson discloses how the hot gas is cooled by a heat-exchanger.

Appellants argue that page 9, lines 17-18 of Gibson discloses four types of reaction processes for producing ethylene polymers and the gas phase is carried out exactly as is implied, i.e., in gas phase. However, as disclosed by Gibson, on page 12, lines 10-23, the Gibson gas phase process is operated in the presence of both liquid and gas.

Regarding the 103 rejection of present claims and the double patenting rejection of claims over 10/668,934 in view of Hinton, appellants argue that the examiner's description of Hinton is incomplete since Hinton teaches a process for polymerization of conjugated dienes (dienes versus olefins). The two references disclose entirely different polymerization processes (gas phase versus liquid phase). The argument is not persuasive since Hinton discloses polymerizing olefins such as ethylene (col. 4, lines 16-20) and both discloses the reaction has both phases as discussed above. Also is known that diene is also an olefin (di-olefin).

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Examiner Thuan D Dang

Art Unit 1764

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SPE Nadine Norton

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